



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/508,806	09/21/2004	Armin Bernhard	BAW-0010	3944
23413	7590	09/26/2006	EXAMINER	
CANTOR COLBURN, LLP 55 GRIFFIN ROAD SOUTH BLOOMFIELD, CT 06002			FLORY, CHRISTOPHER A	
			ART UNIT	PAPER NUMBER
			3762	

DATE MAILED: 09/26/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/508,806

Applicant(s)

BERNHARD, ARMIN

Examiner

Christopher A. Flory

Art Unit

3762

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 September 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 September 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>09/21/2004</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: 56 (in Fig. 11). Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

2. The disclosure is objected to because of the following informalities: the third full paragraph of page 6 makes reference to "leaf spring 35" on two occasions, yet there is no reference 35 in the drawings. It is clear from the context of the rest of the specification that Applicant intended to write --leaf spring 34--.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-4, 6 and 8-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Ball et al. (US Patent 5,624,376, hereinafter referred to as Ball'376).

Regarding claim 1, Ball'376 discloses a sound receiver from an implantable hearing aid (TITLE; ABSTRACT) comprising an implantable electromechanic transducer which converts the force resulting of an accelerated mass into an electric signal (Figs. 3-5, transducer 100; ABSTRACT); the sound receiver providing a mounting mechanism on at least one of the ossicles in the ossicle chain (abstract; Figs. 8-10; Fig. 5, titanium prongs 52).

Regarding claim 2, Ball'376 discloses the floating mass transducer comprising a piezoelectric transducer (ABSTRACT; column 3, lines 24-45).

Regarding claims 3 and 11, Ball'376 discloses the transducer and hermetic housing to be made of biologically compatible material (column 7, lines 30-35; column 8, lines 10-21 and 50-55; column 10, lines 15-25).

Regarding claim 4, Ball'376 discloses a metallic conductive housing (column 8, lines 35-55; column 9, lines 30-35).

Art Unit: 3762

Regarding claims 6 and 9, Ball'376 shows the sound receiver rigidly fixed to the malleus or incus, whereby the incus and stapes are disconnected (Figs. 8 and 9; column 10, line 58 through column 11, line 5).

Regarding claim 8, Ball'376 discloses a vibratory structure placed inside the housing (ABSTRACT).

Regarding claim 10, the phrase "destined for a cochlea implant" does not provide a positive limitation on the claims, and therefore does not patentably distinguish over the prior art, as any transceiver could be destined for a cochlea implant. Furthermore, the embodiments shown in Figs. 8-10, 14, 18 and 19a of Ball'376 can be considered cochlear implants, because they have the function of enhancing the throughput to the inner ear through the oval window, thus enhancing or augmenting the natural function of the cochlea.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ball'376 in view of Baumann et al. (US Patent Publication 2002/0138115).

Regarding claim 5, Ball'376 discloses the invention substantially as claimed, but does not expressly disclose that the sound receiver further comprise an A/D-converter

Art Unit: 3762

and an impedance transformer inside the housing. In the same field of endeavor, Baumann et al. teaches an implantable hearing aid with both an A/D converter (Fig. 2, A/D converters 30 and 31; paragraphs [37]-[40]) and an impedance transformer (paragraph [66]). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Ball'376 with the A/D converter and impedance transformer of Baumann et al. to provide the same advantages of more efficiently processing data and amplifying the input voltage.

7. Claims 7 and 12 rejected under 35 U.S.C. 103(a) as being unpatentable over Ball'376 in view of Lesinski et al. (US Patent 5,531,787) and in view of Leysieffer et al. (US Patent 6,398,717).

Regarding claims 7 and 12, Ball'376 discloses the invention substantially as claimed, but does not expressly state that the sound receiver have an entire mass of less than 50 and 30 milligrams respectively. In the same field of endeavor, Lesinski et al. teaches a microsensor with a mass of less than 30 milligrams (column 9, line 50 through column 10, line 7; claim 7). Likewise, in the same field of endeavor, Leysieffer et al. teaches an implant with a total mass of 25 mg on average in order to reduce the forces of inertia upon acceleration by external effects such as impact and vibration and thereby minimize loss of signal in the ossicle chain (column 11, lines 55-65). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Ball'376 with a mass of less than 30 milligrams as taught in both Lesinski et al. and Leysieffer et al. in order to provide the Ball'376 system with the same advantages of reducing inertial forces and minimizing signal loss in the middle ear

Art Unit: 3762

(motivation to combine provided by Leysieffer et al., column 11, lines 55-65). In the alternative, it would have been obvious to one having skill in the art at the time of the invention was made to make a sound receiver with a relatively small mass, such as less than 30 milligrams, since it has been held to be within the general skill of a worker in the art to select known materials and components on the basis of their suitability for the intended use, such as light weight, as a matter of obvious design choice. Since the Ball'376 device discloses each and every one of the structural components of the claimed invention, it follows that one of ordinary skill in the art could select light-weight or miniaturized components and materials to construct a transducer of less than 30 milligrams.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher A. Flory whose telephone number is (571) 272-6820. The examiner can normally be reached on M - F 8:30 a.m. to 5:00 p.m..


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Angela Sykes can be reached on (571) 272-4955. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3762

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Christopher A. Flory

15 September 2006



George Manuel
Primary Examiner